C0070022

TECHNICAL ANALYSIS
FIVE-YEAR PERMIT RENEWAL
C. V. SPUR COAL PROCESSING AND LOADOUT FACILITY
ACT/007/022

Beaver Creek Coal Company
Carbon County, Utah
August 7, 1989

UMC 785.19 Underground Coal Mining Activities on Areas or Adjacent to Areas Including Alluvial Valley Floors in the Arid or Semi-Arid Areas of Utah-(RVS)

Existing Environment and Applicant's Proposal

The C. V. Spur Coal Processing and Loadout Facility permit area is located approximately 4,000 feet southwest from the Price River floodplain and 4,000 feet north of Miller Creek. A reconnaissance study (Nimick et al., 1985) identified potential alluvial valley floors along the Price River floodplain, between the towns of Price and Wellington, and Miller Creek. The reconaissance study recognized surface irrigation, subirrigation, and potentially irrigable sites to delineate potential alluvial valley floors.

Plate 6-1 identifies the presence of Quarternary alluvium within and adjacent to the Price River in Sections 1, 2 and 12, T15S, R10E. Moreover, the Price River occurs within a broad low relief valley. The river has constructed a floodplain approximately 400 feet wide and its channel exceeds three feet in width and six inches in depth. Between Price and Wellington, areas of subirrigation and irrigation occur on the floodplain deposits (Plate 1, Nimick et al., 1985).

Although Miller Creek has also been identified as a potential alluvial valley floor (Plate 1, Nimick et al., 1985), examination of Plate 6-1 indicates Quarternary alluvium is not present within and adjacent to the stream.

Surface drainage at the coal processing and loadout facility site consists of a few dry washes that drain to the Price River, approximately 4,000 feet to the east, as shown on Plate 7-1.

The permit area consists of undeveloped rangeland, vegetated by salt and drought-tolerant species. Shadscale and mat saltbush are major components of the vegetation community. The permit area has not been developed for any agricultural activity or farming practice, including the pasturing of livestock, production of hay, or any other crop.

Compliance

The Division hereby determines on the basis of published information and information provided on Plate 6-1 that unconsolidated streamlaid deposits holding streams are present and there is sufficient water to support agricultural activities along the Price River in Sections 1, 2 and 12, T15S, R10E. In contrast, the Division also determines that unconsolidated streamlaid deposits holding streams do not occur along Miller Creek south of the permit area. Accordingly, the Division designates the floodplain area in Sections 1, 2 and 12 that is underlain by Quarternary alluvium to be an Alluvial Valley Floor.

Two aquifers occur within and adjacent to the permit area (see discussion under UMC 817.41). However, only the unconfined upper aquifer may have the potential to be hydrologically connected to Quarternary alluvium within the identified Price River Alluvial Valley Floor.

Hydraulic conductivity data given on page 7-10 indicate water moves through the weathered bedrock of the unconfined upper aquifer at rates up to approximately .007 feet/minute. In addition, borehole monitoring data suggest aquifer storage changes seasonally from high during the late spring to low during the late winter. Ground water moves generally in an east-northeast direction. Water quality data show extremely high levels of total dissolved solids (1,500 to 48,00 mg/1) and sulfate (1,000 to 31,000 mg/1). These data are characteristic for shallow ground-water resources found in weathered Mancos shale. No long term trends in the deterioration of shallow ground-water quality have been observed.

The applicant has installed a French drain to intercept shallow ground-water flow along the northern and western margins of the permit area. Ground water is directed westward towards the Price River Alluvial Valley Floor for discharge purposes.

Surface drainage controls provide for total containment of all disturbed area runoff from the 10-year, 24-hour storm event plus one year of sediment accumulation.

The Division considers the eastern portion of the permit area to have a moderately high potential for being hydrologically connected year round, in the subsurface, to the designated Price River Alluvial Valley Floor. However, the Division determines that there

is a low potential for degrading alluvial valley floor ground-water quality because the naturally occurring ground water has such poor quality. The applicant has committed to continue monitoring the shallow unconfined aquifer along the eastern and western portions of the permit area.

The Division determines that the proposed operation:

1. Does not include the extraction of coal;
2. Will not result in a significant disturbance to the surface or ground-water regime; and
3. Occurs on undeveloped rangeland which is not significant to farming, grazing, or any other agricultural activity.

The requirements of paragraphs (d) and (e) of this section are hereby waived, as provided by UMC 785.19(c)(3)(ii).

UMC 817.11 Signs and Markers-(WAW)

Existing Environment and Applicant's Proposal

The applicant commits to install and maintain signs or markers in a clear and legible fashion during the conduct of all activities to which they pertain or until bond release. Representations of these signs are shown on pages 3-39 through 3-43.

Compliance

The applicant commits to post and maintain the required signs and markers.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.13-.15 Casing and Sealing of Underground Openings-(DW)

Existing Environment and Applicant's Proposal

Table 7-1a lists the location, total depth, casing and completion records of all drill holes on the C. V. Valley Spur Coal Processing and Loadout Facility. Drill hole locations are shown on Plate 7-1.

All holes will either be cemented entirely or cased and cemented to total depth, with a cement plug at the surface.

Compliance

There are no underground mine workings at the site. Therefore, the mine entry part of this section is not applicable.

All openings are for shallow ground water monitoring. The openings have been managed and will be sealed to prevent acid and/or other toxic drainage from entering the openings. Until final removal, each opening is sealed with a PVC cap. (Refer to Figure 7-1, page 7-4 for opening and well design.) After final removal, the openings will be either entirely cemented or cased and cemented to total depth with a cement plug at the surface.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.22 Topsoil: Removal-(HS)

Existing Environment and Applicant's Proposal

The C. V. Spur Coal Processing and Loadout Facility is a combination of pre-Law (prior to the 1977 enactment of Public Law 95-87, the Surface Mine Control and Reclamation Act) and post-Law disturbance (page 3-45). Approximately 77.2 acres of land were disturbed before enactment of Public Law 95-87. Topsoil was not salvaged from these areas. The applicant proposes to use substitute topsoil material (disturbed landfill) as a plant growth medium for reclamation of areas disturbed pre-Law (page 3-46). In the fall of 1989, the applicant will implement a Reclamation Test Plot (Plate 9-1) on the disturbed landfill (pre-Law) area adjacent to Sedimentation Pond #6 in the northeast corner of the permit area (A9-2-1). The pre-Law coal processing waste disposal area will be covered with six inches of the stockpiled topsoil (see discussion under UMC 817.81-.85).

Topsoil was separately removed and stockpiled from approximately 35.4 acres of post-Law disturbance (page 3-45). Chemical and physical analyses and soil mapping unit descriptions of the pre- and post-Law disturbance area soils are located on pages 8-29 and 8-3 through 8-20.

The applicant does not anticipate additional removal of topsoil during the next permit term (page 3-18). If the need for coal processing waste bank expansion or other disturbance arises, the applicant will separately remove topsoil prior to all new disturbance (page 3-46).

Compliance

The applicant has proposed utilizing existing disturbed landfill material as a substitute topsoil material for reclamation of areas disturbed pre-Law (with the exception of the coal processing waste). Chemical and physical characterization of the proposed substitute topsoil material indicates a saline (electrical conductivity [E.C.] > 4 mmhos/cm at 25°C)/sodic (sodium adsorption ratio [SAR] > 10) plant growth medium.

The Division will determine the suitability of the proposed substitute topsoil material (disturbed landfill) based on results from the reclamation test plots.

Chemical and physical analyses of native topsoil material removed from the post-Law disturbance areas were performed. Profile descriptions and chemical and physical analyses indicates saline soils (Mean E.C. = 6.9 mmhos/cm, Range E.C. = 4.8-15.7 mmhos/cm) within the salvaged material.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.23 Topsoil: Storage-(HS)

Existing Environment and Applicant's Proposal

Topsoil was removed from approximately 34.5 acres of disturbance and placed in two separate stockpiles (Plate 3-2). The applicant has protected the topsoil stockpiles against wind and water erosion by reseeding the surface of the piles and placing an impermeable earthen berm around the piles (page 3-53 and field inspection by Division staff, conducted April 21, 1989). Topsoil stockpiles will be reseeded in the fall of 1989 (page 3-54).

The topsoil mass balance table shown on page 8-37a indicates a topsoil storage volume of 58,663 cubic yards. The "Seedbed Quality Material Volume Table" (page 8-33) indicates an excavated topsoil volume of 22,540 Bank Cubic Yards. Swell factors for the excavated topsoil were not presented.

Compliance

Removed topsoil has been placed within the permit area. Immediate redistribution of topsoil is not practical because facilities will remain operational through the life of the preparation plant.

The area where topsoil has been stored (Plate 3-2) is relatively flat (approximately 3-6 percent slopes). The surrounding terrain does not pose any imminent danger for slope failure.

Revegetation efforts on topsoil stockpiles have met with little success. Approximate vegetation cover of desirable species such as fourwing saltbush (Atriplex canescens) and Indian ricegrass (Oryzopsis hymenoides) is less than five percent total cover. The remaining vegetative cover (30-40 percent total cover) is comprised of halogeton (Halogeton glomeratus). The applicant will reseed the stockpiles in the fall of 1989 in an attempt to establish a more favorable vegetation cover.

The applicant will be in compliance when the following stipulation is met.

Stipulation UMC 817.23-(HS)-(1)

1. Within 30 days of permit approval, the applicant must submit an as-built survey of the soil stockpiles. This survey must include the volume of topsoil stored, maximum and minimum heights, slopes, and all other pertinent dimensions.

UMC 817.24 Topsoil: Redistribution-(HS)

Existing Environment and Applicant's Proposal

The applicant has committed to uniformly redistributing six inches of topsoil over the entire post-Law disturbance area (approximately 35.4 acres). Six inches of topsoil will be redistributed over the entire coal processing waste bank (see discussion under UMC 817.81-.85). The coal processing waste

material will be annually sampled to determine the acid- and/or toxic-forming potential (page 3-3 and 3-3a). In the event that results of this analysis indicate an acid- and toxic-forming potential, the applicant has committed to covering all acid- and/or toxic-forming materials with four feet of suitable non-acid and non-toxic forming material (page 3-3a).

Areas that were disturbed pre-Law, except on the coal processing waste area, will not have topsoil replaced. These areas (approximately 77.2 acres) will utilize the proposed substitute topsoil, if proven to be suitable (see discussion under UMC 817.22), which underlies the coal and operational facilities on site. All disturbed areas will be backfilled and graded to the approximate original contour, with the exception of the coal processing waste bank (page 8-32). Prior to topsoil redistribution, the applicant will remove material which is contaminated by more than 50 percent coal (page 3-56). Fill material will be compacted and scarified to assure stability (page 3-56).

Topsoil redistribution and seeding will be completed in the fall following grading operations. Clayey areas will be chiseled to eliminate compaction (page 8-38). Seedbed preparation will include discing and application of organic mulch (page 8-32). On 3h:1v slopes or less, native hay mulch, applied at a rate of one ton/acre will be mechanically crimped in with a straight disc (page 3-62). On slopes greater than 3h:1v, hydromulch and tackifier will be applied at a rate of 2,000 lbs./acre and 120 lbs./acre, respectively.

Compliance

The reclamation plan for redistribution of topsoil to a uniform depth of six inches is adequate to support the postmining land use of small mammal and songbird habitat.

Existing disturbed landfill material, if demonstrated to be suitable, will be prepared to promote favorable vegetation establishment.

The published Soil Conservation Service soil survey description for Carbon county indicates predisturbance soil conditions of slightly altered parent material (C-horizon) overlaid with an A-horizon two-to-ten inches thick. The depth of planned topsoil redistribution closely parallels predisturbance conditions.

Scarification of regraded spoils, discing and chiseling of redistributed topsoil should alleviate compaction and ensure good overburden/soil contact, thereby preventing potential slippage and creating a soil profile conducive to root penetration.

Crimped surface mulch and tackifying agents should ensure adequate protection from wind and water erosion by raising the wind profile above the soil surface and acting as a barrier against raindrop impact.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.25 Topsoil: Nutrients and Soil Amendments-(HS)

Existing Environment and Applicant's Proposal

Prior to seeding, randomized soil samples will be taken and analyzed for all areas to be reclaimed. Fertilizer type and application rates will be determined based on the results of these analyses (page 3-56 and 3-56a).

Compliance

The applicant has committed to randomly sampling redistributed topsoil to determine types and rates of fertilizer application.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.41 Hydrologic Balance: General Requirements-(DW/RVS)

Existing Environment and Applicant's Proposal

Ground Water-(RVS)

The applicant provides information about ground water on pages 7-1 through 7-57 and Plates 7-1 and 7-2.

The coal processing and loadout facility is located on the Bluegate Shale Member of the Mancos Shale. Table 7-5 through 7-14a and the Annual Hydrologic Monitoring Reports from 1985, 1986, 1987 and 1988 give data from 13 boreholes that were drilled for the purposes of identifying and evaluating shallow ground-water resources within and adjacent to the permit area. Shallow (2 to 20 feet below the surface) unconfined ground water occurs within the surficial weathered portion of the Bluegate Shale Member. Shallow ground-water levels seasonally vary from a low during the late winter to a high during the late spring. Flow is towards the east-northeast and discharge most likely occurs in proximity to the Price River. Water quality is poor with extremely high levels of TDS (1,500 to 48,000 mg/1), and sulfate (1,000 to 31,000 mg/1). These values are characteristic for shallow ground-water resources found in weathered Mancos Shale.

The Ferron Sandstone Member occurs at a depth of 500 feet below the surface (Figure 6-1). Drilling has identified a regional confined aquifer in the Ferron Sandstone Member.

The applicant conducted aquifer testing to determine hydraulic conductivity in the weathered and unweathered portions of the Bluegate shale member (page 7-10). A pump test indicated a hydraulic conductivity of .007 ft/min for weathered bedrock, whereas a slug test indicated unweathered bedrock is impermeable.

The applicant installed a French drain along the northern and western boundaries of the permit area to intercept shallow ground-water flow and isolate the coal processing and loadout facility from this ground-water resource (page 7-54 through 7-56).

Surface Water-(DW)

Surface water impacts are minimized by routing disturbed area runoff through sedimentation ponds. Undisturbed drainage is routed around the disturbed area through ditches and culverts (Section 7.2, page 7-58, PAP).

Surface water quality is characterized by high Total Dissolved Solids (TDS), due to contact with the Mancos Formation. One ephemeral drainage transverses the northern portion of the property. This drainage has contributions from spirngs on the west side of the adjacent county road. Flow is diverted around the disturbed area by the means of a ditch.

Compliance

Ground Water-(RVS)

The applicant has provided information that identifies the occurrence of ground water within and adjacent to the permit area.

Shallow ground-water quality is poor and it is not anticipated that surface activities will further degrade this resource. Moreover, the applicant has installed a French drain to prevent potential contamination of the shallow ground-water resource.

Aquifer testing indicated that the deep ground-water resource is hydrologically isolated from the overlying shallow ground-water resource within and adjacent to the permit area.

The applicant is in compliance with the ground water requirements of this section.

Surface Water-(DW)

Three surface water monitoring locations are used to characterize the quantity and quality of surface waters. Two are located along the northern diversions ditch and the third is for the outfall of Sedimentation Pond #6 which is UPDES regulated.

Monitoring is adequate to determine potential adverse impacts to the hydrologic balance.

The applicant is in compliance with the surface water requirements of this section.

Stipulations

None.

UMC 817.42 Hydrologic Balance: Water Quality Standards and Effluent Limitations-(DW)

Existing Environment and Applicant's Proposal

All surface drainage from the disturbed area, including disturbed areas that have been graded, seeded, or planted is passed through a series of sedimentation ponds. All sedimentation ponds and diversion ditches will remain in place until an effective vegetation cover has been reestablished to reduce suspended solids runoff from the affected areas (page 3-54).

Sedimentation Pond # 6 is the last pond in the series. Water from this pond is normally not discharged, but is placed back into the raw water feed at the preparation plant for reuse (page 7-78). All runoff from the disturbed area will pass through Sedimentation Pond #6. Water is discharged from this point only when the 10-year, 24-hour design storm is surpassed. The point is regulated by UPDES permit No. UT-00239490.

Compliance

The applicant's sedimentation pond system will contain the 10-year, 24-hour storm event assuming the ponds are empty. Because the applicant uses water drained to the sedimentation ponds for reuse in the preparation facilities, the chance for discharge is reduced.

All surface runoff is either passed through or completely detained in a series of sedimentation ponds.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.43 Hydrologic Balance: Diversions and Conveyance of Overland Flow, Shallow Ground Water Flow, and Ephemeral Streams-(DW)

Existing Environment and Applicant's Proposal

The undisturbed drainage is allowed to flow into natural channels, bypassing the disturbed area by means of ditches and culverts. Excess ground water from the French drain, which is not used in the processing facility, is discharged into the Price River.

The TR-20 storm hydrology analysis performed to assess sedimentation pond outlet adequacies is also structured to permit assessment of collection ditch and culvert capacities. Storm flows from each sub-drainage are routed through the culverts and ditches shown on Plate 3-2. Design dimensions, discharges and velocities for the collection ditches are provided on Plate 7-5. Design dimensions for the culverts designated on Plate 3-2 are provided in Table 7-25. All designed analyses were performed for a 25-year, 24-hour rainfall event using the Farmer-Fletcher rainfall distribution.

A French drain is used at the western and northern boundaries of the permit area to intercept shallow ground water as it flows toward the disturbed area. This water is then either used in the coal processing facility or is discharged directly into the Price River (see Section 7.1.4).

Compliance

Temporary diversions have been designed and constructed to safely pass the peak flow for the 10-year, 24-hour precipitation event.

No permanent diversions exist at the C. V. Spur Coal Processing and Loadout Facility (page 3-54).

Diversions have been designed, constructed, and are maintained in a manner which prevents additional contributions of suspended solids to streamflow and to runoff outside the permit area.

Each temporary diversion will be removed and the affected land regraded, topsoiled and revegetated in accordance with applicable state and federal regulations.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.44 Hydrologic Balance: Stream Channel Diversions-(DW)

Existing Environment and Applicant's Proposal

There are no perennial, intermittent, or ephemeral streams with drainage areas greater than one square mile within the permit area. Therefore, this section is not applicable.

UMC 817.45 Hydrologic Balance: Sediment Control Measures-(DW)

Existing Environment and Applicant's Proposal

All runoff from the facilities area drains through a series of sedimentation ponds and eventually is contained in Sedimentation Pond #6. Off site impacts in the form of erosion or sedimentation would result from uncontrolled discharge at Sedimentation Pond #6.

Should uncontrolled discharges occur which exceed effluent limits, the system will be modified to produce outflow which meets effluent limits. Modifications may include enlarging ponds, reworking filter dikes, or removing sediment (page 7-90).

Sedimentation ponds will remain in place until revegetation standards are met.

Undisturbed runoff is diverted around the disturbed area by means of diversion ditches which do not cause additional erosion.

Alternate sediment controls for final reclamation will consist of silt fences or straw bale dikes, placed near the outlet of each channel, prior to leaving the permit area and at other locations along the ditches as needed.

Compliance

The applicant prevents, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area.

Sediment is retained within disturbed areas, and undisturbed runoff is diverted away from disturbed areas.

Diversion ditches do not require the use of protected linings.

Alternative sediment control during final reclamation is adequate to control erosion or sedimentation until vegetation success can be obtained.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds-(DW)

Existing Environment and Applicant's Proposal

The applicant has five sedimentation ponds for the control of disturbed area runoff. Sedimentation ponds #1, #2, #3, and #5 all route discharges to Sedimentation Pond #6.

Sedimentation ponds and on-site drainage controls are shown on Plate 3-2. Sedimentation ponds are located to collect and treat runoff from the disturbed area. All ponds are designed to store at least one year of sediment plus the runoff volume from a 10-year, 24-hour storm event. The ponds are arranged such that all runoff from the disturbed area passes through Sedimentation Pond #6.

Water collected at Sedimentation Pond #6 is normally not discharged, but is placed back into the raw-water feed at the processing facility for reuse.

The sedimentation ponds will be cleaned periodically to maintain at least one year's sediment storage capacity. Cleaning is accomplished using a backhoe or dragline.

The sedimentation ponds have been constructed below the ground surface. Design specifications and details are found on Plate 7-4. Design capacities of each existing sedimentation pond together with the required capacities for sediment storage and runoff volume are provided in Table 7-21.

Required runoff volume capacities were determined by adding the direct precipitation on the pond to the runoff volume from a 10-year, 24-hour event.

The sediment capacity requirements were determined using the Universal Soil Loss Equation (USLE).

Compliance

Runoff volumes were verified using the SCS runoff computation.

Sediment volumes were verified using the USLE.

Total pond volume requirements incorporating one year sediment accumulation and runoff volume from the 10-year, 24-hour storm event indicate that all ponds are adequately sized. There should be no discharge from Sedimentation Pond #6 during the 10-year, 24-hour event (page 3-32).

Emergency spillway designs will adequately pass the 25-year, 24-hour storm event.

All sedimentation ponds are built below ground level with a compacted berm approximately three feet high around the perimeter. This berm acts as freeboard.

Gravel filter dikes have been implemented in Sedimentation Pond #6 to increase water treatment capabilities. The dikes will pass a flow of up to 40 gpm.

All sedimentation ponds were constructed under the supervision of, and certified by, a registered professional engineer (page 7-80).

Because the sedimentation ponds under consideration are all incised, there was minimal disturbance to surrounding areas during construction. Riprap protection is in place on all emergency spillways and conveyance systems between sedimentation ponds.

All sedimentation ponds and diversion ditches will remain in place until an effective vegetation cover has been reestablished to reduce suspended solids runoff from the affected areas (page 3-54).

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.47 Hydrologic Balance: Discharge Structures-(DW)

Existing Environment and Applicant's Proposal

The design specifications for outlet structures are listed on Plate 7-4. A stage-discharge relation was developed for the outlet channels using Manning's Equation with the channel dimensions also listed on Plate 7-4 and a roughness coefficient of 0.03.

Inflow hydrographs were derived using the SCS curve number runoff procedure and associated TR-20 computer model.

The results of the TR-20 analysis for a 25-year, 24-hour rainfall and the Farmer-Fletcher rainfall distribution are provided in Table 7-24. The worst-case scenario was analyzed which involved routing the storm through the sedimentation ponds when they were full.

Discharge structures are equipped with erosion protection consisting of grouted riprap and concrete (page 7-87). Overflow details are found on Plate 7-4.

Compliance

Sedimentation pond discharges are controlled by riprap to reduce erosion, prevent deepening or enlargement of downstream stream channels, and to minimize disturbance of the hydrologic balance. Structures were designed according to standard engineering procedure.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.48 Hydrologic Balance: Acid and Toxic-Forming Materials-(HS)

Existing Environment and Applicant's Proposal

The applicant commits to conducting annual analysis for acid-and/or toxic-forming potential of each individual coal seam processed. In addition, the applicant commits to conducting annual analyses of the coal processing waste bank (page 3-3 and 3-3a). The following constituents are presently analyzed: pH and Acid-Base Potential (based on percent pyritic-sulfur). In the future (beginning in 1989) the constituents analyzed will be: pH, E.C., SAR, acid base potential (including pyritic and organic sulfur) Selenium and Boron. Analyses will be conducted in accordance with the laboratory methodologies outlined in Table C of the Division Guidelines for Management of Topsoil and Overburden.

Laboratory results of previously collected coal and coal processing waste are located on pages 3-4 through 3-15 and in annual monitoring reports.

The applicant commits to covering all acid-and toxic-forming materials which are identified through annual analyses of coal and coal processing waste with four feet of non-acid and non-toxic forming materials (page 3-3a).

Compliance

To date, laboratory results do not indicate a potential hazard for acid-and/or toxic-forming materials.

If acid-and/or toxic forming materials are determined to exist on site, the applicant has committed to develop a plan to ensure drainage from these materials will not be detrimental to surface water and vegetation.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.49 Hydrologic Balance: Permanent and Temporary Impoundments-(DW)

Existing Environment and Applicant's Proposal

Once the revegetation success is determined to be acceptable, all diversions and sedimentation ponds will be filled with concrete rubble and gravel stored as part of the berms (page 3-54).

Temporary impoundments which are not part of the sedimentation pond system include the thickener pond, thickener overflow pond, and the plant overflow pond.

Berms and embankments will be maintained to design standards and dimensions adequate to serve the purpose for which they were installed (page 7-90).

Compliance

The applicant will not leave any permanent impoundments. Therefore, paragraph A of this section is not applicable.

All sedimentation ponds meet the requirements of UMC 817.46(e)-(u).

The thickener overflow and plant overflow ponds are incised impoundments which have no embankments. The thickener pond is constructed with concrete sides and bottom (Plate 3-6). The plant overflow pond has a volume of 0.72 acre-feet, and is only used in the event that a mechanical failure or some other unforeseen circumstance would cause an overflow of water while the drain water storage sump within the plant was completely full.

Locations of berms and embankments which are subject to scour or erosion shall be riprapped or modified to prevent further erosion.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.50 Hydrologic Balance: Underground Mine Entry and Access Discharges-(RVS)

Existing Environment and Applicant's Proposal

Operations at the C. V. Spur Coal Processing and Loadout Facility do not encompass underground coal mining activities. This section is not applicable.

UMC 817.52 Hydrologic Balance: Surface and Groundwater Monitoring-(DW)

Existing Environment and Applicant's Proposal

Surface Water

Surface runoff in the permit and adjacent area is of poor quality with total dissolved solids (TDS) ranging from 2000 to 3000 mg/l.

One UPDES monitoring point (CV-15) exists at the outfall of Sedimentation Pond #6 is monitored monthly according to the requirements of the permit. Monitoring at this discharge point will be terminated upon removal of the Sedimentation Pond #6. CV14W is monitored biannually for background water quality. Analyzed parameters are found in Table 7-15. All monitoring locations are found on Plate 7-1.

A monitoring station (CV16W) prior to Sedimentation Pond #6 will be implemented during the initial stages of reclamation. Monitoring Stations CV14W and CV16W will be in operation until final bond release (page 7-102). All reclamation surface water monitoring locations are found on Plate 3-7.

Ground Water

A water table does exist in some locations above the impermeable alluvium or weathered shale and gravelly pods above the Bluegate Shale Member. The water is of poor quality and accumulations of salt are found where the water table approaches the ground surface.

Thirteen observation wells exist at the C. V. Spur Coal Processing and Loadout Facility. These wells extend through the soil and weathered shale and terminate at the surface of the unweathered Bluegate Shale Member. Well locations are shown on Plate 7-1. Typical well completions are illustrated in Figure 7-1.

Water levels are measured biannually in the spring and fall, prior to water quality sampling. Water quality analysis is completed for the parameters listed in Table 7-15 for both the wells and the French drain. Data is submitted quarterly and is also presented in the Annual Hydrologic Monitoring Report.

Operational monitoring will be conducted semiannually after cessation of mining until bond release.

Compliance

Surface Water

The applicant's water monitoring program is adequate to measure the water quality and quantity of discharges from the permit area.

Data are submitted to the Division quarterly within 60 days of the end of each quarter. Results are also analyzed and summarized in an Annual Hydrologic Monitoring Report.

Surface water flow and quality will continue to be monitored after surface-disturbed areas have been regraded and stabilized. These data will be used to demonstrate that the quality and quantity of runoff without treatment is consistent with all applicable state and federal water quality standards.

The applicant is in compliance with the surface water monitoring part of this section.

Ground Water

The frequency, parameters tested, and location of ground water sampling will identify potential adverse impacts within and adjacent to the permit area.

The applicant is in compliance with the ground-water monitoring part of this section.

Stipulations

None.

UMC 817.53 Hydrologic Balance: Transfer of Wells-(RVS)

Existing Environment and Applicant's Proposal

The applicant does not propose to transfer wells. Therefore, this section is not applicable.

UMC 817.55 Hydrologic Balance: Discharge of Water into an Underground Mine-(RVS)

Existing Environment and Applicant's Proposal

Operations at the C. V. Spur Coal Processing and Loadout Facility do not encompass underground coal mining activities. Therefore, this section is not applicable.

UMC 817.56 Hydrologic Balance: Postmining Rehabilitation of Sedimentation Ponds, Diversions, Impoundments and Treatment Facilities-(DW)

Existing Environment and Applicant's Proposal

No permanent sedimentation ponds, diversions, impoundments or treatment facilities are planned to be left at the C. V. Spur Coal Processing and Loadout Facility.

Once revegetation standards are met, the applicant proposes to constuct three permanent channels as shown on Plate 3-7. These channels are designated RC-1, RC-2 and RC-3. A typical cross section of the reclaimed channels is shown on Figure 7-7. Design details are summarized for each of the channels in Table 7-28. The channel design is based on the following criteria:

1. 100-year, 24-hour precipitation event - 2.74 inches;
2. SCS TR55 storm flow generation using Type II storm;
3. Average curve number of 80;
4. Manning's n of 0.035; and
5. Critical erosion velocity of five feet per second.

Alternative sediment controls for final reclamation will consist of silt fences or straw bale dikes, placed near the outlet of each channel, prior to leaving the permit area, and at other locations along ditches as needed (page 7-95).

Compliance

Post-reclamation hydrology design meets all criteria specified under UMC 817.49.

The applicant has used acceptable engineering practices and methodologies to design the post-reclamation hydrology. Design storms and other applicable parameters used in the calculations were all found to be adequate.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones-(DW)

Existing Environment and Applicant's Proposal

There are no perennial streams within or in close proximity to the proposed permit area. No stream has the biological community defined in paragraph C of this section. Therefore, this section is not applicable.

UMC 817.59 Coal Recovery-(RVS)

Existing Environment and Applicant's Proposal

Operations at the C. V. Spur Coal Processing and Loadout Facility do not encompass underground coal mining activities. Therefore, this section is not applicable.

UMC 817.61-.68 Use of Explosives: General Requirements-(WAW)

The applicant does not propose to use explosives. Therefore, this section is not applicable.

UMC 817.71-.74 Disposal of Excess Spoil and Underground Development Waste-(WAW)

Existing Environment and Applicant's Proposal

Sedimentation pond waste from the Gordon Creek #2, #7 and #8 Mine and Trail Mountain #9 Mine is disposed of at the C. V. Spur Coal Processing and Loadout Facility (page 3-3). This material is analyzed each time the ponds are cleaned out for acid- or toxic-forming materials and will be handled according to the requirements of UMC 817.103, if required.

Compliance

The plan for disposing of excess spoil meets the requirements of this section.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.81-.85 Coal Processing Waste Banks-(WAW/HS)

Existing Environment and Applicant's Proposal

The applicant's proposal for coal processing waste disposal is contained in Section 3.2.3 (pages 3-2 through 3-23) and Plate 3-3. The disposal area is located in the southeastern corner of the permit area and is designed, constructed, and maintained under the supervision of a professional engineer (page 3-3).

Inspections will be conducted at least quarterly until final reclamation has occurred. Upon identification of a potential hazard, the Division will be immediately notified (page 3-3a). Copies of the inspection findings will be maintained on site (page 3-14).

A subdrainage system has been installed upslope from the disposal area. The system consists of a backfilled trench containing an eight-inch diameter perforated pipe, surrounded by a clean two-inch drain rock filter, covered with an impervious plastic. The intercepted flow is directed to the northeast corner of the property by a buried 10-inch solid pipe, then discharged into a buried 25,000 gallon sump (page 3-14).

Surface drainage from above the disposal area is conveyed by Ditch CD-7 to Sedimentation Pond #5. Slope protection is provided through the use of terracing. All earth-lined ditches will be revegetated upon completion of construction.

The permit area contains three disposal areas as shown on Plate 3-3. General construction requirements are given on pages 3-15 and 3-16 which ensure that vegetation and topsoil will be removed prior to disposal of coal processing waste. Coal processing waste is spread and compacted (to 90 percent maximum dry density) in layers not to exceed 24 inches, and the pile will be graded and maintained to allow controlled drainage and prevent water impoundment.

A stability analysis (Figure 3-3, page 3-19 and 3-20) demonstrated a static factor of safety greater than 1.5. The applicant proposes to cover all post-Law disturbances including the coal processing waste bank with a minimum of six inches of topsoil/subsoil (page 8-36a). Also, sampling will be conducted annually to analyze the acid-and/or toxic-forming potential of the disposed material and all coal seams that undergo processing.

The applicant commits to covering acid-and/or toxic-forming materials, as described under UMC 817.48.

Compliance

The applicant has adequately addressed the designs, construction and maintenance of coal processing waste disposal areas. The applicant proposes covering the coal processing waste bank with a minimum of six inches of topsoil. The shallow depth of cover material should be adequate for the following reasons: 1) to date, the refuse material analyses indicates a non-acid and non-toxic forming potential and 2) the depth of planned topsoil redistribution closely parallels predisturbance soil conditions.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.86-.87 Coal Processing Waste: Burning and Burned Waste Utilization-(WAW)

Existing Environment and Applicant's Proposal

The applicant's contingency plan for extinguishing a coal processing waste fire is contained on pages 3-16 through 3-18. Upon detection of a fire, the Division and MSHA will be contacted and one of two methods will be employed for extinguishing the fire (page 3-17). The applicant does not anticipate removal of any burned coal waste or any other materials from the disposal areas. However, if removal of any burned materials becomes necessary, prior approval will be obtained from the Division and MSHA (page 3-18).

The applicant commits to inspect the banks at least quarterly for any potential hazards.

Compliance

The applicant has properly identified mitigation measures to be initiated upon detection of a coal processing waste fire.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.88 Coal Processing Waste: Return to Underground Workings-(WAW)

Operations at the C. V. Spur Coal Processing and Loadout Facility do not encompass underground coal mining activities. Therefore, this section is not applicable.

UMC 817.89 Disposal of NonCoal Waste-(WAW)

Existing Environment and Applicant's Proposal

Temporary storage of noncoal waste is in a metal trash receptacle. As needed, the garbage is loaded into a truck and disposed in an approved sanitary landfill.

Oil and grease wastes are collected in a surface tank. As needed, the tank will be pumped into a commercial disposal truck and disposed of off-site in an approved manner (page 3-2, Figure 3-12, page 3-54C).

Compliance

The applicant's proposal meets the requirements of this section.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.91-.93 Coal Processing Waste: Dams and Embankments-(WAW)

There are no dams and embankments constructed of coal processing waste at the C. V. Spur Coal Processing and Loadout Facility. Therefore, this section is not applicable.

UMC 817.95 Air Resources Protection-(WAW)

Existing Environment and Applicant's Proposal

The applicant commits to the implementation of dust control devices such as covered conveyors, water sprays, water trucks and chemical dust suppressants (page 3-50).

Specific dust control measures and potential emissions are discussed in Section 11.2, pages 11-11 through 11-21. The Bureau of Air Quality issued an Air Quality Approval Order dated August 21, 1980 (Appendix 11-1).

Compliance

The applicant has committed to the implementation of dust control measures to minimize fugitive dust. The applicant also has acquired the required Air Quality Approval Order.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.97 Protection of Fish, Wildlife, and Related Environmental Values-(BAS)

Existing Environment and Applicant's Proposal

The C. V. Spur Coal Processing and Loadout Facility area is classified as a saltbush vegetation community, characterized by low-growing shrubs and a large amount of bare ground (Chapter 9). This community provides cover and food for relatively few wildlife species.

Species which utilize habitats within and adjacent to the permit area include the ring-necked pheasant, mourning dove, desert cottontail, badger, coyote, and whitetail prairie dog (Section 10.3.2). Observations by company environmental personnel have failed to document the occurrence of raptors or migratory birds of high federal interest on the site (Secton 10.3.3). However, due to the operation's proximity to surrounding cropland and the Price River, the area could provide minimal food and cover for these species (Sections 10.3.1 and 10.3.3).

Three federally listed threatened or endangered species of wildlife potentially occur around C. V. Spur Coal Processing and Loadout Facility. These are the bald eagle, peregrine falcon, and black-footed ferret. Habitat surrounding the permit area is ranked as having substantial value to the bald eagle and peregrine falcon (Section 10.3.3). The area is also classified as historic range for the black-footed ferret. However, field studies conducted by the applicant in the whitetail prairie dog community showed no evidence of use by ferrets (Section 10.3.3.1).

Mitigation and management plans for terrestrial species emphasize contemporaneous reclamation. Other mitigation measures include conducting "employee awareness" programs to inform company personnel of sensitive periods for wildlife, and prevention of hunting and harassment of wildlife in the permit area (Section 10.5). A commitment has also been made to not use persistent pesticides on the area without regulatory approval (Section 3.5.5.4).

Following mining, the applicant will implement revegetation methods designed to restore and enhance wildlife habitat on disturbed areas. The final revegetation plant mix includes herbaceous and woody species adapted to on-site conditions and of known value to wildlife for cover and forage (Section 3.5.5).

Compliance

The C. V. Spur Coal Processing and Loadout Facility has been used since 1975. Of the 117 acres planned for disturbance (Section 9.5), 112.6 have already been disturbed (Table 9-1). Future disturbance will be limited to continuance of the operation. Any adverse effect to wildlife has already occurred. Further impact will be inconsequential.

Field surveys and literature searches to determine the presence of threatened and endangered plant and animal species and bald or golden eagles and their habitats have been conducted by the applicant (Section 9.4 and 10.2). None were found to occur.

Although the project area is classified by the Utah Division of Wildlife Resources (UDWR) as historic range for black-footed ferrets (Section 10.3.3), no sightings have been made on or near C. V. Spur Coal Processing and Loadout Facility and an intensive field survey found no evidence of their presence (Section 10.3.3.1). Therefore, no impact to this species is expected.

The applicant has made a commitment to promptly report the presence of any threatened or endangered species or any bald or golden eagle that has not been previously reported (Section 3.4.5.3).

The U.S. Fish and Wildlife Service (USFWS) determined armless powerline configurations at the C. V. Spur Loadout Facility to be raptor-safe (letter dated November 10, 1982 from USFWS to DOGM). However, crossarm type configurations were determined by UDWR to require modification (pages 10-27 and 10-27a). The applicant has committed to making the recommended changes.

Access and haul roads do not constitute a significant hazard to wildlife, as the vicinity supports only minimal numbers of big game animals, and migratory routes are not known to exist.

No habitat of unusually high value for fish and wildlife occurs within the permit area. The operation's impact on local wildlife is believed to be negligible.

Plant materials, used for permanent revegetation, are shown in Tables 3-2 and 3-3. Species have been selected which provide nutrition and cover to wildlife and will enhance wildlife habitat after bond release.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.99 Slides and Other Damages-(WAW)

Existing Environment and Applicant's Proposal

Coal processing waste banks are inspected at least quarterly for potential safety hazards. If a potential hazard is identified, the Division will be immediately notified of the hazard and the emergency procedures to be implemented (page 3-3a). If a slide occures which may have a potential adverse effect on public property, health, safety, or the environment, the applicant will notify the Divison immediately and comply with remedial measures required by the Division (page 3-52).

Compliance

The applicant has committed to initiate the appropriate actions to ensure the safety of the public, property and the environment.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.100 Contemporaneous Reclamation-(BAS)

Existing Environment and Applicant's Proposal

The applicant has committed to contemporaneous reclamation of refuse disposal areas after their completion (Section 3.5.1). Seeding, fertilizing, and mulching will be performed immediately following soil redistribution.

Final reclamation shall be conducted immediately after final site preparation and during the first normal period of favorable planting conditions (Section 3.5.1 and 3.5.6.1).

Compliance

The applicant's plan for contemporaneous reclamation meet the requirements of this section.

The applicant is in compliance with this section.

Stipulations

None

UMC 817.101 Backfilling and Grading: General Requirements-(WAW)

Existing Environment and Applicant's Proposal

The applicant's proposal for backfilling and grading is contained on pages 3-55 and 3-55a. Postmining topography and drainage for the coal processing waste disposal area is shown on Plate 3-7; cross sections of the reclaimed disposal areas are shown on Plate 3-3.

Upon termination of the operations, the surface area, except the coal processing waste disposal sites, will be graded. Areas to be backfilled will consist of the seven ponds and diversions (see discussion under UMC 817.46). Backfilling materials include berms, foundations, road fill, and other suitable fill materials.

All final grading, preparation and placement of topsoil, will be done along the contour to minimize erosion and instability. Reclamation procedures will be implemented within 180 days of termination of operations and will follow the approximate time schedule given on page 3-63.

Compliance

The applicant has committed to regrade and backfill the site to achieve a final configuration that is compatible with the surrounding terrain. Since the site lies on a fairly level to moderately sloping area, backfilling and grading will be minimal. The applicant demonstrated a static factor of safety of at least 1.5.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-Forming Materials-(WAW/HS)

Existing Environment and Applicant's Proposal

Coal processing waste was and/or is produced by processing coal from the Beaver Creek Coal Company's Gordon Creek #2, #7 and #8 Mine (active), Gordon Creek #3 and #6 Mine (reclaimed), Huntington #4 Mine (reclaimed), and Trail Mountain #9 Mine (active). Analysis of the coal indicates a low sulfur (0.5 percent to 0.8 percent) product, whereas coal reject is low-sulfur, non-acid, and non-toxic (page 3-3, Figures 3-1 and 3-2).

The applicant commits to annually sample each coal seam that is being processed and analyze a representative sample from the disposal area to determine the acid- or toxic-forming potential of the material (page 3-3 and 3-3a). Based on these analyses, the applicant proposes to cover post-Law disturbance including coal processing waste with six inches of topsoil. This material will be disced to eliminate cloddiness (page 3-56). Pages 8-31 through 8-34 discuss the replacement of topsoil on the disturbed areas.

In the event that acid-and/or toxic-forming materials are identified, the applicant has committed to covering any acid-and/or toxic-forming materials with four feet of suitable non-toxic and/or non-acid forming material.

Compliance

The applicant has proposed to cover all post-Law disturbed areas including coal processing waste with six inches of topsoil. Although data indicate that the coal and coal processing waste material is non-acid or non toxic-forming, the applicant has committed to annually analyze a representative sample from the coal processing waste areas and each coal seam that is or will be processed. Tables 8-4 and 8-6 address the quality and quantity of available soil medium.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.106 Regrading or Stabilizing Rills and Gullies-(WAW)

Existing Environment and Applicant's Proposal

Areas that develop rills or gullies deeper than nine inches will be filled, graded, or otherwise stabilized and reseeded. All final grading, preparation and placement of topsoil will be done along the contour to minimize subsequent erosion and instability (page 3-55). Soil erosion will be controlled through the use of mulch, chemical stabilizers, or other appropriate techniques (page 3-62).

Seeding and transplanting, mulching, and reclamation management are discussed on pages 3-56 through 3-63.

Compliance

The applicant commits to stabilize, fill, regrade, and revegetate areas that develop rills or gullies in excess of nine inches. Reclamation activities will be conducted along the contour to minimize subsequent erosion. Mulching will be implemented to protect slopes and enhance seed germination.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.111 Revegetation: General Requirements-(BAS)

Existing Environment and Applicant's Proposal

The applicant presents temporary and final reclamation plans in Section 3.5.5. The final reclamation seed mix proposed for revegetation of 117 acres of disturbance consists of five grass, four forb and five shrub species (Table 3-2).

An additional 5.28 acres of linear disturbance, occured when the Price River pipeline was installed (Section 3.2.6.1, Plate 1-1), and will be revegetated. The pipeline seed mix includes four grass, one forb, and two woody species (Table 3-3). Hydroseeding rate exceeds 80 seeds PLS/ft^2 for both mixes. Rates for drill seeding will be reduced by one half.

On-going test plot studies (Appendix 9-1, 9-2; Section 3.5.2) and temporary revegetation efforts are designed to develop procedures and plant materials which will promote rapid and effective final reclamation (Section 3.5.5.2).

Compliance

All plant species in the final revegetation seed mix are perennial (except for sunflower and yellow sweetclover), and are capable of regeneration and plant succession.

Revegetation methods, materials, and timetables are expected to achieve a permanent and diverse vegetative cover and recovery of predisturbance productivity.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.112 Revegetation: Use of Introducted Species-(BAS)

Existing Environment and Applicant's Proposal

The final revegetation seed mix contains four introduced species (Table 3-2). These are crested wheatgrass (both fairway and Ephraim varieties), Russian wildrye, yellow sweetclover, and prostrate kochia. The temporary (interim) revegetation seed mix proposes use of one additional introduced species, alfalfa (Table 3-1). The applicant justifies use of introduced species on pages 3-58 and 3-60.

Compliance

Both varieties of crested wheatgrass have performed exceptionally well in the applicant's test plot studies to date. The species appears to be particularly adapted to the site's climatic and edaphic conditions.

Results of U.S. Forest Service test plots near Emery, Utah have documented Russian wildrye and prostrate kochia to be top performers for conditions similar to those existing at the C. V. Spur Coal Processing and Loadout Facility.

Yellow sweetclover is valued as a fast-growing, nitrogen-fixing species. Its role in soil stabilization and micro-climate modification promotes establishment of desirable perennial species.

The qualities of the above species will be further evaluated during test plot and temporary revegetation studies (Appendix 9-1 Appendix 9-2, Sections 3.5.2 and 3.5.5.2). Compatibility with native plants and adaptability to the site will also be studied further.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.113 Revegetation: Timing-(BAS)

Existing Environment and Applicant's Proposal

Seeding will take place in the fall after 15 October, immediately following seedbed preparation (Section 3.5.1, 3.5.5.2, and 3.5.6.1).

Compliance

The applicant meets the requirements of this section by proposing to seed immediately after final site preparation and during the first normal period for favorable planting conditions (Section 3.5.5.4, page 3-62).

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.114 Revegetation: Mulching and Other Soil Stabilizing Practices-(BAS)

Existing Environment and Applicant's Proposal

Native hay mulch will be applied at a rate of one ton/acre on slopes 3:1 or less. Mulch will be crimped with a straight disc. Slopes steeper than 3:1 (see Plate 3-7) will be hydroseeded and then

hydromulched. Wood fiber hydromulch will be applied at a rate of 2000 lbs/acre for slopes between 2:1 and 3:1, and at a rate of 2500 lbs/acre for slopes steeper than 2:1. A chemical tackifier will be used at a rate of 120 lbs./acre (Section 3.5.5.3).

Compliance

Both mulch options, rates of application, and methods of anchoring meet the requirements of this section.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.116 Revegetation: Standards for Success-(BAS)

Existing Environment and Applicant's Proposal

Success of revegetation will be measured by comparison with the approved reference area, which represents the salt desert shrub vegetation type (Plate 9-1 and Section 9.3.2.5). The reference area has been determined to be in good range condition by the Soil Conservation Service (Figure 9-1). The reference area is fenced and will not be disturbed. Range condition will be periodically reassessed to assure maintenance of fair or better condition (page 9-14).

The reference area was sampled for total vegetative cover, cover by species, productivity by life form, and by species, and shrub density and height. Sample adequacy was achieved for all parameters with the exception of cover data (Section 9.3.2.5, Tables 9-2, 9-3, 9-4 and 9-9). The applicant will resample cover during revegetation success monitoring (Section 3.5.5.4). At that time, sample adequacy requirements will be satisfied (page 3-62b).

Success standards for ground cover, production, and woody plant density are identified in Section 3.5.5.2 and on Tables 9-6, 9-7 and 9-8.

Periodic measurements of revegetation will be conducted to determine reclamation success (Section 3.5.5.4).

Compliance

Bond liability will continue for not less than ten years under the conditions of this section.

Ground cover, woody plant density, and production shall be considered equal to their respective reference area counterparts, when there is 90 percent success at 90 percent statistical confidence (Section 3.5.5.2).

Monitoring commitments (page 3-62b) are adequate to document progress toward realization of reclamation objectives. Should problems occur, which require maintenance or repair work, the applicant commits to take appropriate action (Section 3.5.5.4).

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.117 Revegetation: Tree and Shrub Stocking for Forest Land-(BAS)

Existing Environment and Applicant's Proposal

The surface of the C. V. Spur Coal Processing and Loadout Facility is privately owned (Section 4.3.4), and occurs within a salt desert vegetation community (Section 9.3.2.1). Woody plant stocking level is a consideration, however, because postmining land use includes wildlife habitat (Section 3.4.5 and 3.5).

Compliance

The applicant proposes to include four woody plant species in the permanent reclamation seed mixture (Table 3-2). Rate of application is 29 PLS/ft^2. Containerized or bare root stock is proposed for planting along the Price River pipeline (Table 3-3). The applicant commits to supplemental plantings of woody species (page 3-60a) in the event reestablished stocking levels do not meet the bond release standard, identified on Table 9-8.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.121-.126 Subsidence Control-(RVS)

Existing Environment and Applicant's Proposal

Operations at the C. V. Spur Coal Processing and Loadout Facility do not encompass underground coal mining activities. Therefore, this section is not applicable.

UMC 817.131-.132 Cessation of Operations-(WAW)

Existing Environment and Applicant's Proposal

Page 3-44 addresses the requirements for temporary cessation of operations. The applicant commits to notifying the Division when operations have temporarily ceased and submit mitigation measures to be employed in accordance with the approved plan.

Upon termination of operations at the C. V. Spur Coal Processing and Loadout Facility, reclamation activities will commence within 180 days, according to an approximate reclamation time schedule (page 3-63). All surface facilities will be removed, the surface area graded (except the disposal site), topsoil spread and the area revegetated. After revegetation success criteria has been satisfied, all drainage structures, culverts, and diversions will be removed and the areas reclaimed.

Compliance

The applicant commits to notify the Division in the event of cessation of operations for a period of 30 days or more and conduct the required monitoring.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.133 Postmining Land Use-(BAS)

Existing Environment and Applicant's Proposal

Prior to the existing land use as a coal processing and loadout facility, the land was capable of providing limited wildlife habitat and supporting very limited grazing (Section 4.4.1) and was zoned

for agricultural use (Section 4.4.3). Present zoning is for industrial use (Section 4.5). Following the cessation of the current operation, the applicant will reclaim the area employing seed mixtures which contain species that are adapted to on-site conditions and are of known value to wildlife (Section 3.4.5 and 3.5). The applicant proposes to restore the area for songbird and small mammal habitat (Section 4.5).

Compliance

The applicant is the surface owner of the permit area (Secton 4.3.4 and Plate 4-1). The applicant's proposal to return the land to wildlife habitat is feasible, as discussed under UMC 817.111-.117 of this document and will be compatible with adjacent land uses.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.150-.176 Roads-(WAW)

Existing Environment and Applicant's Proposal

The main access road (coal haulage road) extends approximately 2600 feet and is classified as a Class I road. The road is maintained at a width of 24 feet, and is gravel-surfaced. This road will be used and maintained throughout the life of the operation (page 3-24). Certified, as-constructed road plans and cross sections are shown on Plate 3-4.

The road that extends from the preparation plant to the coal processing waste disposal area (approximately 1584 feet), is gravel-surfaced, and will be maintained at an approximate width of 20 feet throughout the active phase of coal processing waste disposal. This road as well as the remaining access roads are classified as Class II roads.

Roads will be watered as necessary to control dust and drainage controls will be maintained to prevent contaminated water in the disturbed area from leaving the permit area (page 3-29a).

Roads required for access to the sedimentation ponds and diversions will be left in place until pond and diversion reclamation is undertaken. Roads will then be removed and reclaimed, according to Section 3.5.4. There are no plans to leave any roads at this property (page 3-54a).

There are no Class III roads proposed or existing at the C. V. Spur Coal Processing and Loadout Facility.

Compliance

The applicant has adequately addressed the designs, locations, maintenance and reclamation of Class I and Class II roads at this site.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.180 Other Transportation Facilities-(WAW)

Existing Environment and Applicant's Proposal

A railroad grade embankment is external and adjacent to the eastern edge of the permit area. The grade supports the main rail line and is owned and maintained by the Denver and Rio Grande Western Railroad.

A railroad loop consisting of a single set of tracks (approximately 8340 feet in length) lies within the permit area and serves as a loop for the unit trains. The loop is owned by the applicant and will be used and maintained throughout the life of the facility (page 3-27, Plate 3-5).

Pages 3-27 through 3-29 address the seven separate conveyor runs utilized during the coal handling process. Grades of all conveyors are shown on Figure 3-7, page 3-28. All conveyors will be used throughout the operational life of this facility.

Transportation facilities are maintained to prevent damage to fish, wildlife, and related environmental values, as well as additional contributions of suspended solids of streamflow or runoff

outside the permit area (page 3-29). Additional measures are implemented to control and minimize degradation of water quality and quantity, control and minimize erosion and siltation as well as pollution (pages 3-29 and 3-30).

Compliance

The applicant commits to install, maintain and reclaim the conveyor systems and railroad loop in an environmentally sound manner. Water sprays, enclosures for the conveyors, and drainage controls are implemented to prevent water and air contamination.

The applicant is in compliance with this section.

Stipulations

None.

UMC 817.181 Support Facilities and Utility Installations-(WAW)

Existing Environment and Applicant's Proposal

Plate 3-1 and 3-2 depict all buildings and structures associated with the C. V. Spur Coal Processing and Loadout Facility. There are no plans to modify or reconstruct structures at this site (page 3-2).

All support facilities will be maintained and reclaimed in a manner which prevents damage to fish, wildlife, and related environmental values, and prevents additional contributions of suspended solids and streamflow or runoff outside the permit area (page 3-1).

Compliance

The applicant commits to maintain and reclaim the support facilities in an environmentally sound manner.

The applicant is in compliance with this section.

Stipulations

None.

UMC 828.00 Prime Farmland Investigation-(HS)

Existing Environment and Applicant's Proposal

The applicant contends that there are no lands identified as prime farmland within the proposed permit area (page 8-22).

Compliance

On the basis of soil survey and field review of the lands within the permit area, there are no soil map units that have been designated prime farmland by the Soil Conservation Service (SCS). Refer to the SCS letter of June 16, 1980, from T. B. Hutchings, State Soil Scientist, on page 8-23, regarding a negative prime farmland determination.

The applicant is in compliance with this section.

Stipulations

None.

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